

What is claimed is:

1. A method for determining whether a substance is an activator or an inhibitor of a function of a UDD-protein comprising: (a) contacting the UDD-protein with a substance to be tested; and (b) measuring whether the function is inhibited or activated.
2. A method for determining whether a substance is an activator or an inhibitor of a function of a protein comprising: (a) contacting the protein with a substance to be tested, wherein the protein is a functionally equivalent variant, mutant or fragment of a UDD-protein; and (b) measuring whether the function is inhibited or activated.
3. The method according to claim 1 wherein the inhibition or activation of the function is measured directly.
4. The method according to claim 1 wherein the inhibition or activation of the function is measured indirectly.
5. The method according to claim 1 wherein the UDD-protein is a mammalian UDD-protein.
6. The method according to claim 5 wherein the UDD-protein is a human UDD-protein.
7. The method according to claim 1 wherein the method is performed using a cellular system.
8. The method according to claim 1 wherein the method is performed using a cell-free system.

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9. The method according to claim 1 wherein the UDD-protein consists of an amino acid sequence selected from the group consisting of: SEQ ID NO:4 and SEQ ID NO:8.

5 10. The method according to claim 9 wherein the amino acid sequence is SEQ ID NO. 4.

11. The method according to claim 9 wherein the amino acid sequence is a functionally equivalent mutant, variant or fragment of SEQ ID NO. 4.

10 12. The method according to claim 9 wherein the amino acid sequence is SEQ ID NO. 8.

13. The method according to claim 9 wherein the amino acid sequence is a functionally equivalent mutant, variant or fragment of SEQ ID NO. 8.

15 14. The method according to claim 1 wherein the function is substrate binding.

20 15. A method for determining an expression level of a UDD-protein comprising: (a) determining the level of UDD-protein expressed in a hyperactivated macrophage; (b) determining the level of UDD-protein expressed in a non-hyperactivated macrophage; and (c) comparing the level of the UDD-protein expressed in step (a) to the level of the UDD-protein expressed in step (b), wherein a difference in the levels indicates a differentially expressed protein.

25 16. The method according to claim 15 wherein the hyperactivated macrophage is a mammalian macrophage and the non-hyperactivated macrophage is a mammalian macrophage.

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17. The method according to claim 16 wherein the hyperactivated macrophage is a human macrophage and the non-hyperactivated macrophage is a human macrophage.

5 18. The method according to claim 15 wherein the UDD-protein consists of an amino acid sequence selected from the group consisting of: SEQ ID NO:4 and SEQ ID NO:8.

10 19. The method according to claim 18 wherein the amino acid sequence is SEQ ID NO:4.

20 20. The method according to claim 18 wherein the amino acid sequence is a functionally equivalent variant, mutant or fragment of SEQ ID NO:4.

15 21. The method according to claim 18 wherein the amino acid sequence is SEQ ID NO:8.

22. The method according to claim 18 wherein the amino acid sequence is a functionally equivalent variant, mutant or fragment of SEQ ID NO:8.

20 23. A for diagnosing or monitoring a chronic inflammatory airway disease comprising: (a) determining the level of UDD-protein expressed in a hyperactivated macrophage; (b) determining the level of UDD-protein expressed in a non-hyperactivated macrophage; and (c) comparing the level of the UDD-protein expressed in step (a) to the level of the UDD-protein expressed in step (b), wherein a difference in the levels indicates a differentially expressed protein.

25 24. The method according to claim 23 wherein the chronic inflammatory airway disease is selected from the group consisting of: chronic bronchitis and COPD.

25. The method according to claim 15 wherein the method is performed using a macrophage or a part thereof obtainable from a site of inflammation.

5 26. A substance determined to be an activator or an inhibitor of a UDD-protein.

27. A substance determined to be an activator or an inhibitor of a UDD-protein according to the method of claim 1.

10 28. A substance for the treatment for a disease wherein the substance is an activator or an inhibitor of a UDD-protein.

15 29. The substance according to claim 28 wherein the disease is a chronic inflammatory airway disease.

30. The substance according to claim 29 wherein the chronic inflammatory airway disease is selected from the group consisting of: chronic bronchitis and COPD.

20 31. A pharmaceutical composition comprising at least one substance which is an activator or an inhibitor of a UDD-protein; and a pharmaceutical carrier.

25 32. A pharmaceutical composition comprising at least one substance which is an activator or an inhibitor of a UDD-protein according to the method of claim 1; and a pharmaceutical carrier.

30 33. A method for treating a chronic inflammatory airway disease comprising: administering to a being in need of such treatment an effective amount of a pharmaceutical composition comprising at least one substance determined to be an activator or an inhibitor of a UDD-protein.

34. The method according to claim 33 for treating a mammal.

35. The method according to claim 33 for treating a human.

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36. The method according to claim 33 for treating a chronic inflammatory airway disease selected from the group consisting of: chronic bronchitis and COPD.

10 37. A method for treating a chronic inflammatory airway disease comprising: administering to a being in need of such treatment an effective amount of a pharmaceutical composition comprising at least one substance determined to be an activator or an inhibitor of a UDD-protein according to the method of claim 1.

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38. A method for selectively modulating a UDD-protein in a macrophage, comprising administering a substance determined to be an activator or an inhibitor of a UDD-protein.

20 39. A method according to claim 38 wherein the macrophage is involved in a chronic inflammatory airway disease

40. The method according to claim 39 wherein the chronic inflammatory airway disease is selected from the group consisting of: chronic bronchitis and COPD.

25 41. A method for selectively modulating a UDD-protein in a macrophage, comprising administering a substance determined to be an activator or an inhibitor of a UDD-protein according to the method of claim 1.

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